

WHAT IS CLAIMED IS:

1. A semiconductor device which comprises a substrate and a semiconductor element mounted thereon through a bump bonding part, wherein

5 the semiconductor element has been encapsulated by coating the back and the edges of the semiconductor element with a thermosetting sheet material having tackiness.

2. A process for producing a semiconductor device which comprises a substrate and a semiconductor element
10 mounted thereon through a bump bonding part, which comprises encapsulating the semiconductor element by coating the back and the edges of the semiconductor element with a thermosetting sheet material having tackiness.

3. The process for producing a semiconductor
15 device of claim 2, wherein the tackiness of the sheet material as measured at time of use is from 2 to 15 in terms of ball tack.

4. The process for producing a semiconductor
device of claim 2, which comprises covering the back of the
20 semiconductor element with the sheet material having an area larger than the back of the semiconductor element, press-bonding the sheet material to thereby coat the back and the edges of the semiconductor element with the sheet material, and then thermally curing the sheet material to
25 thereby encapsulate the semiconductor element.

5. The process for producing a semiconductor device of claim 3, which comprises covering the back of the semiconductor element with the sheet material having an area larger than the back of the semiconductor element, press-bonding the sheet material to thereby coat the back and the edges of the semiconductor element with the sheet material, and then thermally curing the sheet material to thereby encapsulate the semiconductor element.